

THAT WHICH IS CLAIMED IS:

1. A dash insulator that is configured to be attached to a vehicle firewall in face-to-face contacting relationship therewith, wherein the firewall includes an opening formed therethrough, the dash insulator comprising:

a substrate having opposite first and second surfaces and opposite first and second edge portions;
an opening formed through a portion of the substrate;
a pass-through assembly comprising opposite first and second sides and a peripheral edge portion, wherein the pass-through assembly first side is attached to the substrate second surface in face-to-face contacting relationship such that the substrate opening is covered by the pass-through assembly first side, wherein the pass-through assembly is configured to be sealed against the firewall when the dash insulator is installed such that the firewall opening is covered by the pass-through assembly second side, and wherein the pass-through assembly comprises one or more apertures formed therein, each aperture configured to receive an item extending through the substrate and firewall openings.

2. The dash insulator of Claim 1, further comprising a vehicle brake pedal assembly secured to the pass-through assembly first side via the substrate opening.

3. The dash insulator of Claim 2, further comprising a vehicle brake master cylinder assembly secured to the pass-through assembly second side, and wherein the brake pedal assembly is operably connected to

the brake master cylinder assembly via an aperture in the pass-through assembly.

4. The dash insulator of Claim 1, further
5 comprising a vehicle accelerator pedal assembly secured to the pass-through assembly first side via the substrate opening, and wherein an accelerator linkage operably associated with the accelerator pedal assembly extends through an aperture in the pass-through assembly.

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5. The dash insulator of Claim 1, further comprising an instrument panel attached to the substrate.

6. The dash insulator of Claim 5, wherein the
15 instrument panel is movably attached to the substrate such that movement of the instrument panel relative to the dash insulator facilitates installation of the dash insulator and instrument panel within a vehicle.

20 7. The dash insulator of Claim 1, further comprising a floor covering attached to the substrate.

8. The dash insulator of Claim 7, wherein the
25 floor covering is movably attached to the substrate such that movement of the floor covering relative to the dash insulator facilitates installation of the dash insulator and floor covering within a vehicle.

9. The dash insulator of Claim 1, further
30 comprising sound attenuation material applied to one or more portions of the substrate first and/or second surface, wherein the sound attenuation material is configured to reflect and/or absorb sound directed to the dash insulator.

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10. The dash insulator of Claim 9, wherein the

sound attenuation material comprises a layer of sound attenuation material having a first thickness in a first portion and a second thickness greater than the first thickness in a second portion.

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11. The dash insulator of Claim 9, wherein the sound attenuation material comprises polyurethane.

12. A vehicle cockpit assembly configured to
10 be installed within a passenger compartment of a vehicle, wherein the passenger compartment is separated from an engine compartment by a firewall and includes a floor, wherein the firewall includes an opening formed therethrough, the vehicle cockpit assembly comprising:
15 a dash insulator that is configured to be attached to a vehicle firewall in face-to-face contacting relationship therewith, comprising:

a substrate having opposite first and
20 second surfaces and opposite first and second edge portions;
an opening formed through a portion of the substrate; and
a pass-through assembly comprising
25 opposite first and second sides and a peripheral edge portion, wherein the pass-through assembly first side is attached to the substrate second surface in face-to-face contacting relationship such that the substrate opening is covered by the pass-through assembly
30 first side, wherein the pass-through assembly is configured to be sealed against the firewall when the dash insulator is installed such that the firewall opening is covered by the pass-through assembly second side, and wherein the
35 pass-through assembly comprises one or more apertures formed therein, each aperture

configured to receive an item extending between
the engine and passenger compartments through
the substrate and firewall openings;
an instrument panel attached to the substrate;
5 and
a floor covering attached to the substrate.

13. The cockpit assembly of Claim 12, further
comprising a vehicle brake pedal assembly secured to the
10 pass-through assembly first side via the substrate
opening.

14. The cockpit assembly of Claim 13, further
comprising a vehicle brake master cylinder assembly
15 secured to the pass-through assembly second side, and
wherein the brake pedal assembly is operably connected to
the brake master cylinder assembly via an aperture in the
pass-through assembly.

20 15. The cockpit assembly of Claim 12, further
comprising a vehicle accelerator pedal assembly secured
to the pass-through assembly first side via the substrate
opening, and wherein an accelerator linkage operably
associated with the accelerator pedal assembly extends
25 through an aperture in the pass-through assembly.

16. The cockpit assembly of Claim 12, wherein
the instrument panel is movably attached to the substrate
such that movement of the instrument panel relative to
30 the dash insulator facilitates installation of the dash
insulator and instrument panel within a passenger
compartment of a vehicle.

17. The cockpit assembly of Claim 12, wherein
35 the floor covering is movably attached to the substrate
such that movement of the floor covering relative to the

dash insulator facilitates installation of the dash insulator and floor covering within a passenger compartment of a vehicle.

5 18. The cockpit assembly of Claim 12, further comprising sound attenuation material applied to one or more portions of the substrate first and/or second surface, wherein the sound attenuation material is configured to reflect and/or absorb sound directed to the
10 dash insulator.

 19. The cockpit assembly of Claim 18, wherein the sound attenuation material comprises a layer of sound attenuation material having a first thickness in a first
15 portion and a second thickness greater than the first thickness in a second portion.

 20. The cockpit assembly of Claim 18, wherein the sound attenuation material comprises polyurethane.
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 21. A vehicle, comprising:
 an engine compartment;
 a passenger compartment;
 a firewall separating the engine compartment
25 and passenger compartment, wherein the firewall includes an opening formed therethrough; and

 a vehicle cockpit assembly installed within the passenger compartment, wherein the cockpit assembly comprises a dash insulator that is configured to be
30 attached to the firewall in face-to-face contacting relationship therewith, the dash insulator comprising:

 a substrate having opposite first and second surfaces and opposite first and second edge portions;
35 an opening formed through a portion of the substrate; and

5 a pass-through assembly comprising
opposite first and second sides and a
peripheral edge portion, wherein the pass-
through assembly first side is attached to the
substrate second surface in face-to-face
10 contacting relationship such that the substrate
opening is covered by the pass-through assembly
first side, wherein the pass-through assembly
is configured to be sealed against the firewall
when the dash insulator is installed such that
15 the firewall opening is covered by the pass-
through assembly second side, and wherein the
pass-through assembly comprises one or more
apertures formed therein, each aperture
configured to receive an item extending through
the substrate and firewall openings.

22. The vehicle of Claim 21, further
comprising a vehicle brake pedal assembly secured to the
20 pass-through assembly first side via the substrate
opening.

23. The vehicle of Claim 22, further
comprising a vehicle brake master cylinder assembly
25 secured to the pass-through assembly second side, and
wherein the brake pedal assembly is operably connected to
the brake master cylinder assembly via an aperture in the
pass-through assembly.

30 24. The vehicle of Claim 21, further
comprising a vehicle accelerator pedal assembly secured
to the pass-through assembly first side via the substrate
opening, and wherein an accelerator linkage operably
associated with the accelerator pedal assembly extends
35 through an aperture in the pass-through assembly.

25. The vehicle of Claim 21, further comprising an instrument panel attached to the substrate.

26. The vehicle of Claim 25, wherein the
5 instrument panel is movably attached to the substrate such that movement of the instrument panel relative to the dash insulator facilitates installation of the dash insulator and instrument panel within a vehicle.

10 27. The vehicle of Claim 21, further comprising a floor covering attached to the substrate.

28. The vehicle of Claim 27, wherein the floor covering is movably attached to the substrate such that
15 movement of the floor covering relative to the dash insulator facilitates installation of the dash insulator and floor covering within a vehicle.

29. The vehicle of Claim 21, further
20 comprising sound attenuation material applied to one or more portions of the substrate first and/or second surface, wherein the sound attenuation material is configured to reflect and/or absorb sound directed to the dash insulator.

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30. The vehicle of Claim 29, wherein the sound attenuation material comprises a layer of sound attenuation material having a first thickness in a first portion and a second thickness greater than the first
30 thickness in a second portion.

31. The vehicle of Claim 29, wherein the sound attenuation material comprises polyurethane.

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